

## **ADAPTIVE METHOD FOR AMORTIZING AUTHENTICATION OVERHEAD**

A method is disclosed for amortizing the authentication overhead of data transmissions. The method comprises establishing a first secure transmission of data between a transmitter and a receiver by transmitting at least one token to the receiver during the first secure transmission. There may be any number of senders and receivers, and any receivers may be a sender and vice versa. The method also comprises establishing at least one additional transmission of data between the sender and the receiver and transmitting the data and at least one token during the at least one additional transmission. In addition, the method compares the at least one token transmitted during the at least one additional transmission to the token transmitted during the first secure transmission to guarantee the authenticity of that at least one additional transmission. The method may also include transmitting a preselected number of tokens during the first secure transmission. The number of additional transmissions may or may not correspond to the preselected number of tokens. The at least one additional

transmission may be conducted over an unsecure connection using open communication. The first secure transmission may be protected or encrypted.